## ABSTRACT OF THE INVENTION

Disclosed is a pO157 plasmid-specified polypeptide found in *E. coli* EDL933 and other enterohemorrhagic *E. coli* that binds to and cleaves C1-esterase inhibitor. Also disclosed are methods employing the polypeptide for diagnosing and treating colitis or hemolytic uremic syndrome, and methods of detecting potential therapeutics.